We claim:

1. A method for producing a transgenic cotton plant comprising the steps of:

   (a) obtaining cotton petiole explants,

   (b) exposing the petiole explants to a culture of *Agrobacterium tumefaciens* that harbors a vector comprising an exogenous gene and a selectable marker, the *Agrobacterium* being capable of effecting the stable transfer of the exogenous gene and selection agent resistance gene to the genome of the cells of the petiole explant,

   (c) culturing the petiole explants to induce callus formation,

   (d) selecting transformed callus that expresses the exogenous gene,

   (e) culturing the selected callus in suspension culture to induce formation of embryoids,

   (f) regenerating the embryoids into whole transgenic cotton plants.

2. The method of claim 1 wherein the petiole explants are pre-cultured for a period of time prior to exposure to the culture of *Agrobacterium tumefaciens*.

3. The method of claims 1 wherein the culture media used in steps (b)-(e) have glucose as the sole carbon source.

4. The method of claim 3 wherein the glucose is in an amount of about 10 g/l to about 50 g/l.

5. The method of claim 4 wherein the glucose is in an amount of about 30 g/l.

6. The method of claim 1 wherein the culture media used in steps (b) and (d)-(f) do not contain hormones.

7. The method of claim 1 wherein embyroid germination is carried out in a medium having a source of nitrogen selected from the group consisting of asparagine, glutamine or both asparagine and glutamine.

8. The method of claim 7 wherein the source of nitrogen is in an amount of about 700 mg/l to about 5 g/l.

9. The method of claim 8 wherein the source of nitrogen is in an amount of about 3.8 g/l.

10. The method of claim 7 wherein the source of nitrogen is both asparagine and glutamine, and the asparagine is in an amount of about 200 mg/l to about 1 g/l and the glutamine is in an amount of about 500 mg/l to about 2 g/l.

11. The method of claim 10 wherein the asparagine is in an amount of about 500 mg/l and the glutamine is in an amount of about 1 g/l.

12. The method of claim 1 wherein the suspension culture of step (e) has a duration of less than about 20 days.

13. The method of claim 12 wherein the suspension culture of step (e) has a duration of about 10 days to about 20 days.

14. The method of claim 13 wherein the suspension culture of step (e) has a duration of about 14 days.

15. The method of claim 1 wherein step (c) is carried out in the presence of low concentration of one or more hormones.

16. The method of claim 15 wherein the concentration of any one hormone ranges from 0 to about 1 mg/l.

17. The method of claim 15 wherein step (c) is carried out in the presence of 2,4-dichlorophenoxacetic acid in a concentration ranging from 0 to about 0.5 mg/l and kinetin in concentration ranging from 0 to about 1 mg/l.

18. The method of claim 17 wherein the 2,4-dichlorophenoxylacetic acid is in a concentration of about 0.05 mg/l and the kinetin is in a concentration of about 0.1 mg/l.

Replacement Page